

STUDIES ON THE FLORA OF THE ANDAMAN ISLANDS

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ABSTRACT

Studies and observations, made on the flora of the Andaman Islands during a botanical exploration tour in 1959, are recorded in this paper. Andamans are a group of large and small islands 204 in number, lying in the Bay of Bengal between 13°41' and 10°30' N. latitudes, and 92°11' and 93°7' E. longitudes.

Important vegetation types commonly met with in these islands are the Mangrove forests, Beach forests, Deciduous forests and Evergreen forests at lower and higher elevations.

The floristic composition of the South, Middle, and North Andamans are described in detail. A floristic analysis of the Andaman Islands, based on the collections made during the above tour is presented. An enumeration of the plants collected, is given at the end.

INTRODUCTION

The Andamans are a group of islands, lying in the Bay of Bengal between 13°41' and 10°30' N. latitudes and 92°11' and 93°7' E. longitudes. They are separated by a sea space of 1126 kilometres from the Coramandel coast in the west, and 515 kilometres from the Tenasserim coast in the east. The Andaman group consists of 204 islands, large and small, which stretch out more or less in a north to south direction. The entire length of the Andaman group is estimated to be 352.4 kilometres, while the maximum width of these islands is roughly 51.5 kilometres. The land area of the whole group of islands is approximately 6331.8 kilometres. The main group is recognisable under the North Andaman, the Middle Andaman and the South Andaman and is collectively known as the Great Andaman. Adjoining these islands are the Land fall Island on the extreme north, Sentinel and Interview Islands on the west, Ritchie's Archipelago, Labyrinth, Baratang and Long Islands on the east and Rutland and Little-Andaman on the southern extremity. Little-Andaman is an island 41.8 kilometres by 25.7 kilometres, lying south of Great-Andaman and is separated from it by the Duncan-passage.

TOPOGRAPHY

The Andaman Islands are a mass of hills running north to south and enclosing very narrow valleys, the whole covered by dense tropical jungle. The hills rise especially on the east-coast to a considerable height, the highest point being Mount Saddle peak (732 metres) in North Andaman. The coast line is generally irregular and deeply indented, thus forming safe harbours. Tidal creeks penetrate often far inland and these form the outlets to the numerous boulder-strewn fresh water streams that flow from the interior.

GEOLOGY

The islands form a part of a lofty range of submarine mountains, 1125.6 kilometres long running from Cape Negrais in the Arakan Yoma range of Burma, through Sumatra and Java to the Lesser Sunda Islands and the Moluccas and contain much that is geologically characteristic of Arakan Yoma. The older rocks are early tertiary or late cretaceous, but there are no fossils to indicate age.

CLIMATE

The climate is warm and equiable, the mean temperature varying from 21° to 30° centigrade. The average annual rainfall is about 304.8 centimetres. The islands enjoy both the south-west and north-east monsoons.

SOIL

The soil is usually soft and deep sandy loam, varying from fine texture of the alluvial flats to the gravel strewn soil of the low hills. The higher hills consist of hard clayey soil with micaceous sand stone formation and conglomerates below.

VEGETATION

The Andaman Islands fall under the category of under explored region. Some eminent Botanists in the past have made valuable contributions to the flora of these islands. Kurz (1870) and Parkinson (1923) have dealt with the Flora of the Andamans, the former confining his reports mostly to South Andaman. David Prain however described the flora of Narcondam and Barren Islands (1893) as well as the vegetation of the Coco group of islands (1891). The present paper deals with the observations and studies made by the author, on the floristic composition of the Andaman group, during a botanical exploration conducted in 1959 (January to April).

TABLE I

Chart showing Mean Temperature (Centigrade) for each month during the Years 1955, 1956, 1957.

Month	South Andaman			Middle Andaman			North Andaman		
	1955	1956	1957	1955	1956	1957	1955	1956	1957
January	26.8	25.4	25.9	26.3	25.0	25.5	25.7	24.6	24.7
February	26.2	25.5	26.1	25.3	26.4	25.5	25.4	25.3	24.5
March	27.7	27.4	26.5	27.5	27.5	26.1	26.8	27.4	25.3
April	28.7	27.5	28.7	28.7	27.7	28.5	28.6	28.2	27.7
May	27.4	27.2	29.1	27.7	27.3	29.7	27.6	27.4	28.5
June	26.5	26.8	26.9	27.0	27.1	27.9	26.8	27.1	26.7
July	26.6	26.3	26.7	27.1	26.5	27.5	27.0	26.4	26.6
August	26.1	26.2	26.6	26.8	26.5	27.3	26.8	26.8	26.4
September	26.4	26.4	26.7	26.9	26.8	26.9	26.8	26.7	26.2
October	26.3	26.3	26.7	26.6	26.4	26.8	26.4	26.5	26.0
November	26.4	26.7	27.6	26.6	26.9	27.3	26.7	26.4	26.5
December	25.5	26.4	27.6	25.4	25.8	26.6	24.9	25.3	25.5

TABLE II

Chart showing Mean Monthly Total Rainfall (Centimetres) during the Years 1955, 1956, 1957.

Month	South Andaman			Middle Andaman			North Andaman		
	1955	1956	1957	1955	1956	1957	1955	1956	1957
January	4.32	4.62	1.02	0.99	4.36	0.31	1.75	0.0	0.0
February	2.20	7.06	1.58	0.0	3.60	5.18	0.0	1.98	0.0
March	0.45	3.37	0.0	0.0	0.91	0.0	0.0	0.0	0.0
April	6.75	14.58	0.86	5.76	16.73	0.05	1.44	2.74	1.12
May	70.89	37.41	14.48	82.04	42.67	6.38	65.60	61.01	12.14
June	56.41	37.46	92.51	78.57	32.99	75.48	88.29	34.56	77.84
July	30.53	37.31	39.11	36.27	46.68	25.21	31.92	42.05	24.62
August	49.73	56.23	59.13	21.61	63.67	42.37	33.68	43.12	39.46
September	37.94	29.87	36.90	34.18	33.29	47.48	37.54	31.36	31.25
October	38.20	51.07	34.49	50.34	29.66	30.33	56.89	25.73	27.99
November	31.37	16.35	7.68	39.90	22.37	6.35	33.52	14.35	1.72
December	2.10	7.79	0.69	1.70	1.11	0.94	1.47	0.0	0.0

The vegetation of the islands fall under the following distinct types—

- (1) Mangrove forests which are generally confined to the creeks.
- (2) Beach forests found on the coasts and extending a little interior at times.
- (3) Deciduous forests.
- (4) Evergreen forests at lower elevations, found in alluvial land and in valleys.
- (5) Moist evergreen forest at higher elevations.
- (6) Vegetation in cleared lands and open areas.
- (7) Marine vegetation.

The floristic features of the South, Middle and North Andamans are described below:—

SOUTH ANDAMAN

The forests around Port Blair have been cleared. Paddy is mainly grown in cleared lands. Herbaceous plants such as, *Mimosa pudica*, *Geissopsis cristata*, *Fuirena glomerata*, *Ludwigia parviflora*, *Blumea mollis* grow in paddy fields. In places where the soil is marshy and clayey, *Hyptis capitata*, *Hygrophila quadrivalvis*, *Mikania cordata* and *Ammania baccifera* are the common plants. Grasses which grow intermingled with the above plants are *Paspalum scrobiculatum*, *Ischaemum aristatum*, *Eragrostis elongata*, *Themeda triandra* and *Heteropogon contortus*. *Vitex trifolia* is one of the common shrub, found growing on road sides and waste lands. Associated with it are *Jatropha curcas*, *Triumfetta bartramia*, *Lantana camara* var. *aculeata* and *Urena lobata*. *Eupatorium odoratum* is another common and dominant straggling shrub here. *Ficus benjamina*, *Ficus altissima*, *Enterolobium saman*, *Casuarina equisetifolia* and *Barringtonia racemosa* constitute the tree growth. These trees harbour a number of epiphytic ferns and orchids. *Drynaria quercifolia* grows profusely associated with *Pyrrosia adnascens*. *Dendrobium secundum*, characterised by its handsome pink spike, *Cymbidium aloifolium* and *Dendrobium pierardi* with its fragrant flowers are the epiphytic orchids found growing on branches of trees. *Dischidia benghalensis* and *Dischidia mummularia* hang freely from the branches of trees. *Pothos scandens* is another interesting plant observed, spreading on tree trunks. *Halophila ovata* and *Enhalus aceroides* occur in shallow waters in the tidal zone intermingled with a number of marine algae.

In the jungle surrounding Port Blair, the vegetation is mainly composed of small trees, shrubs and climbers. *Syzygium claviflorum*, *Crypteronia paniculata* and *Anthocephalus indicus* are the moderate sized trees in these jungles. *Bridelia ovata* and *Aporosa villosula* are also met with in these jungles. *Randia densiflora*, *Casuarina tomentosa* and *Morinda citrifolia* grow luxuriantly under the cover of these trees. *Diospyros discolor* is of rare occurrence. The shrubby vegetation is constituted chiefly by *Ixora coccinea*, *Glycosmis pentaphylla* var. *andamanensis*, *Morinda umbellata*, *Gmelina asiatica* and *Breynia rhamnoides*. *Dalbergia tamarindifolia* is a

rare shrub, growing to a height of 3-4 metres. Among the climbers, *Lygodium flexuosum* is the most common one. *Uncaria pedicellata*, a woody climber with stout recurved hooks, *Anodendron paniculatum* and *Dioscorea glabra* are the other climbing shrubs. Herbaceous undergrowth in these jungles is almost absent except for a few plants as *Coldenia procumbens*, *Elephantopus scaber* and *Rungia parviflora* var. *pectinata* occurring here and there.

Typical sandy vegetation is met with at Corbyn's cove, and elsewhere where the sandy beach is covered with trailing *Ipomoea pes-caprae* and *Launaea sarmentosa*. *Ischaemum muticum* is a trailing grass here, rooting at nodes. *Crotalaria retusa*, *Zornia diphylla* and *Oldenlandia corymbosa* are the other herbs growing well in the sandy beach towards the interior. Along the narrow and wide creeks the vegetation is composed of plants which thrive well in brackish water. During high tides the sea water goes far interior into these creeks. Mangroves such as *Rhizophora mucronata* and *Rhizophora conjugata* form impenetrable thickets in these creeks at certain places. *Aegiceras corniculatum* is found occasionally here and there. In places where the brackish water has formed small puddles or streams, *Acrostichum aureum* and *Acanthus ilicifolius* var. *integrifolia* are noticed. The latter forms extensive thickets while the former occurs in association with *Mariscus pennatus*. Another plant that grows well in brackish water streams is *Nipa fruticans*.

The forests at Wright-Myo are of the dense ever green type. The vegetation is composed of tall timber trees together with small trees and shrubs, all of them heavily laden with woody climbers. *Dipterocarpus griffithii* and *Dipterocarpus incanus* are the prominent trees, characterised by their clean, greyish white stem and a crown of green foliage at the top. These trees attain a height of 35-40 metres easily and are popularly known as 'Gurjan' of the forest. Associated with these are *Planchonia andamanica* which is conspicuous by its reddish foliage, *Hopea odorata* and *Planchonella longipetiolatum*. Below the layer of tall trees are a number of moderate sized trees, such as *Baccurea sapida*, *Erioglossum rubiginosum* and *Areca triandra*. The shrubby growth in these forests is constituted by *Maesa andamanica*, *Mallotus acuminatus*, *Jasminum subglandulosum* and *Chlorophytum orchidastrium*. *Sarcostigma wallichii*, *Dinochloa andamanica* and *Smilax aspericaulis* are the principal woody climbers. *Sarcostigma wallichii* climbs up to great heights. Below the shrubby layer and intermingled with them are *Hedyotis paradoxa*, *Hypolytrum latifolium* and *Thysanolaena maxima*. *Limnophila chinensis* and *Cyrtococcum trigonum* are the only herbs found growing on the forest floor. *Nephrodium crassifolium* and *Egenolfia appendiculata* are the common ferns growing on boulders. Epiphytic ferns are of common occurrence in the forest and *Asplenium nidus* and *Drynaria quercifolia* deserve special mention here. At higher elevations the forest gradually becomes deciduous in character. *Pterocarpus dalbergioides*

(Padauk) is the most important timber tree here, characterised by large buttresses. It grows in association with *Terminalia procera*, *Salmalia insignis*, *Parisha insignis* and *Pterocymbium tinctorium*. The forests at Herbertabad are marked by small trees like *Pisonia excelsa*, *Ficus retusa* var. *nitida*, *Pithecolobium angulatum* and *Olex imbricata*. Prominent shrubs in this forest are *Rinorea bengalensis*, *Anaxagorea luzonensis*, *Antidesma dianthum* and *Mallotus repandus*. *Drymoglossum piloselloides* and *Lycopodium phlegmaria* grow epiphytically on the branches of trees.

MIDDLE ANDAMAN

The forests of Long Island, Bharatpur and Elphinstone harbour are of the mixed deciduous type. In Long Island the coast is fringed with beach forests, which extend to a considerable distance interior at certain places. Littoral trees constituting the beach forest are *Calophyllum inophyllum*, *Heritiera littoralis*, *Pongamia pinnata*, *Cynometra ramiflora* var. *mimosoides*, *Thes-*

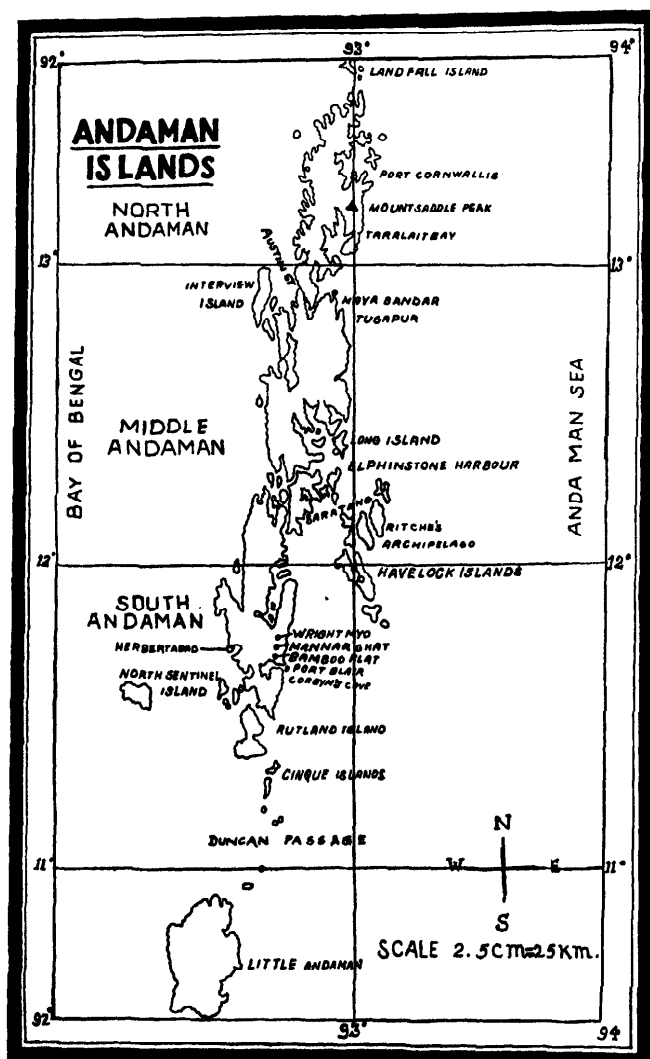
pesia populnea, *Guettarda speciosa* and *Zizyphus mauritiana*. *Mucuna gigantea* is an extensive climber. In the interior *Pandanus andamanensis* and *Pandanus tectorius* are the prominent species.

The mixed deciduous forests are essentially composed of tall timber trees such as *Dipterocarpus incanus*, species of *Terminalia*, *Planchonia andamanica* and *Pterygota alata*. Woody climbers are *Gnetum scandens*, *Calamus andamanicus* and *Dinochloa andamanica*. *Calamus andamanicus* forms large loops on the ground and then climbs up on other trees. *Thunbergia laurifolia* and *Sphenodesme unguiculata* are also of common occurrence in this forest. Next to the layer of tall trees is the second layer having moderate sized and small trees like *Streblus asper*, *Licuala spinosa*, *Linociera terniflora* and *Macaranga tanarius*. Shrubs and shrubby trees grow luxuriantly in the deciduous forest and important species under this category are *Bridelia griffithii*, *Calamus viminalis*, *Grewia disperma*, *Gelonium bifarium* and *Cleidion javanicum*. The forest floor is covered with humus and a number of hard fungi grow on dead twigs. Occasionally herbs and grasses are noticed here and there such as *Nelsonia campestris*, *Alysicarpus vaginalis*, *Peperomia pellucida*, *Dichanthium annulatum*, *Centotheca latifolia* and *Echinochloa colona*.

NORTH ANDAMAN

Tropical wet evergreen forest is met with in Austin and Tugapur. Patches of deciduous forest occur in places where the soil is dry and well drained. Evergreen forests are dominated as usual by the timber yielding trees such as *Dipterocarpus griffithii*, *Terminalia bialata* and *Endospermum malaccense*, all of them forming the canopy of the forest. The undergrowth of the forest consists mostly of shrubby trees, shrubs and climbers. *Bambusa lineata* forms extensive thickets. *Mallotus acuminatus*, *Dalbergia volubilis*, *Otanthra celebica* and *Rinorea bengalensis* are the important species of shrubs. The following climbers are frequent in the evergreen forest namely *Combretum extensum*, *Ancistrocladus extensus* and *Mezoneurum cucullatum*. The forest floor is covered with undershrubs belonging to the families mostly *Acanthaceae* and *Leguminosae*. Some of them are *Desmodium triquetrum*, *Desmodium polycarpum*, *Eranthemum palatiferum*, *Daedalacanthus suffruticosus* and *Peristrophe andamanica*.

In deciduous forests tall trees, which have almost shed their leaves are *Canarium euphyllum*, *Planchonella longipetiolatum*, *Diospyros oocarpa* and *Tetrameles nudiflora*. The last one can easily be recognised by its enormous buttresses. Shrubs and small trees are almost absent and the forest floor is covered with grasses like *Paspalum conjugatum*, *Echinochloa crus-galli* and *Cyrtococcum oxyphyllum*. A remarkable feature is the occurrence of *Cycas rumphii* in the beach forest at Taralait Bay. The plant grows to a height of 10 metres with the main stem forking and giving rise to 3 or 4 branches.



Xiemenia americana and *Ceriops tagal* are the littoral shrubby trees in this area.

Interview Island, which is situated on the west coast opposite to the Austin Strait has its vegetation composed mainly of timber trees. The soil is a combination of clay and limestone. The coast is fringed with dense mangrove forest which is pronounced on the eastern side. In the interior, the forest is thick and ever green in nature which gradually changes to deciduous in character at higher elevations. The forests exhibit clear canopies. The topmost canopy is contributed principally by timber trees like *Dictyocarpus incanus*, *Terminalia procera* and *Terminalia bialata*. Immediately below this, is a second canopy of moderate sized trees like *Pterygota alata*, *Pterocymbium tinctorium*, *Planchonia andamanica* and *Diospyros oocarpa*, which attain a maximum height of 16-25 metres. The third stratum consists of small and shrubby trees, whose maximum height does not exceed more than 16 metres, the important members being *Drypetes andamanica*, *Claoxylon indicum*, *Streblus asper*, *Syzygium samarangense*, *Orophaea hexandra* and *Baccurea sapida*. The shrubby vegetation is very characteristic and most of the plants belong to the family *Euphorbiaceae* such as *Actephila excelsa*, *Mallotus acuminatus*, *Glochidion* sp. etc. Associated with them are *Picrasma javanica*, *Polyalthia andamanica*, *Maesa ramentacea* and *Allophylus cobbe*. *Pycnarrhena calocarpa* and *Gentium scandens* are the woody climbers in these forests. The forest floor is devoid of any herbaceous undergrowth.

Mangrove forests occur in great abundance in Austin Strait, North Andaman and Porlobjig and Bomlungta, Middle Andaman. *Rhizophora mucronata* and *Rhizophora conjugata* are the most dominant trees in these mangrove forests, forming extensive impenetrable thickets. They are characterised by their green, shining foliage and arching stilt roots which support them. Associated with these are *Bruguiera gymnorhiza* and *Bruguiera parviflora*. The former grows to a height of 14-16 metres and is the largest mangrove noticed in these areas.

The vegetation of Little Andaman resembles more or less that of Car Nicobar in having a well developed beach forest ; but differs at the same time in possessing dense forest growth in the interior. The sandy beach is marked by trailing *Ipomoea pes-caprae* and *Cassytha filiformis*, which is parasitic on the former. *Vigna retusa* trails on the ground and also climbs on other plants. Immediately behind these plants is a dense growth of *Scaevola frutescens*, forming a continuous hedge. Intermingled with this are other shrubby plants like *Wedelia biflora*, *Desmodium umbellatum* and *Bridelia ovata*. In the interior a few tall trees like *Manilkara littoralis*, *Casuarina equisetifolia* and *Pterocymbium tinctorium* are noticed. *Ficus gibbosa*, *Guettarda speciosa*, *Pisonia aculeata* and *Orophaea* sp. are the small trees growing along with the above tall trees. *Eulophia andamanensis* is a terrestrial orchid growing under the shade of tress here.

FLORISTIC ANALYSIS

A profuse growth of epiphytic vegetation consisting mostly of orchids and ferns is well represented in South Andaman. The forests of Long Island and Bharatpur in Middle Andaman are mostly of the moist deciduous type while the forests at Tugapur in North Andaman is of the wet evergreen type. Woody climbers are better represented in North Andaman.

Among the interesting species, collected during this exploration, whose main distribution is Burma, the following deserve special mention. *Anaxagorea luzonensis*, *Dipterocarpus incanus*, *Ancistrocladus extensus*, *Geissapsis cristata*, *Olex imbricata*, *Jasminum subglandulosum*, *Linociera terniflora*, *Tournefortia ovata*, *Lepidagathis incurva*, *Sphenodesme unguiculata* and *Aporosa villosula*. A number of plants common in the Malayan peninsula were also observed to occur frequently in the Andaman Islands. Plants, which are distinctly Malayan in character and collected in these islands are *Dalbergia tamarindifolia*, *Mucuna gigantea*, *Mezoneurum cucullatum*, *Pithecolobium angulatum*, *Combretum extensum*, *Barringtonia racemosa*, *Syzygium samarangense*, *Casearia glomerata*, *Diospyros discolor*, *Merremia vitifolia*, *Thunbergia laurifolia*, *Clerodendrum infortunatum*, *Pisonia excelsa*, *Helicia serrata*, *Bridelia griffithii*, *Claoxylon indicum*, *Gelonium bifarium*, *Ficus gibbosa*, *Pipturus velutinus*, *Clinogyne grandis*, *Licuala spinosa* and *Gnetum scandens*. The above mentioned facts indicate that the flora of the Andaman Islands has been subjected to the influence of the two neighbouring countries namely Burma and Malaya. A third interesting feature is the presence of plants of its own. *Orophaea hexandra*, *Polyalthia andamanica*, *Trivalvaria dubia*, *Pycnarrhena calocarpa*, *Rinorea bengalensis*, *Hedyotis paradoxa*, *Maesa andamanica*, *Tabernaemontana crispa*, *Peristrophe andamanica*, *Strobilanthes glandulosus*, *Drypetes andamanica*, *Mallotus andamanicus* and *Dinorchloa andamanica*, constitute the indigenous flora of the Andaman Islands. In general, it may be summed up that the flora of the Andaman Islands is an admixture of Burmese and Malayan plants together with its indigenous plants.

The present survey has yielded a total number of 281 species which include angiosperms, gymnosperms, ferns and fern-allies, distributed over 230 genera and 85 families.

TABLE III

Family	Number of species	Percentage
Euphorbiaceae	35	12.5%
Gramineae	26	9.3%
Rubiaceae	21	7.5%
Leguminosae	20	7.1%
Compositae	15	5.35%
Gymnosperms, ferns and its allies	26	9.3%

Within the families, Euphorbiaceae is well represented with largest number of species and Gramineae ranking next. Rubiaceae, Leguminosae and Compositae are also fairly well represented in the flora. Gymnosperms, ferns and its allies constitute 9.3% of the total collections. The following genera are richly represented, *Ficus* with 7 species, *Oldenlandia*, *Ipomoea* and *Desmodium* each with 4 species and *Ischaemum*, *Cyrtococcum*, *Eragrostis*, *Euphorbia*, *Mallotus*, *Claoxylon*, *Merremia*, *Dendrobium* and *Pteris*, all with 3 species each.

TABLE IV

Habit	Number of species	Percentage
Herbs	103	36.65%
Shrubs	88	31.35%
Climbers	37	13.15%
Trees	53	18.85%
Total	281	100.00%

From the above table it may be seen that shrubs, climbers and trees constitute fairly a major portion in the flora. The herbaceous plants, which form 36.65% of the total collections are composed largely of grasses.

The following families are notably deficient in the flora namely *Ranunculaceae*, *Zygophyllaceae*, *Valerianaceae*, *Dipsacaceae*, *Vacciniaceae*, *Ericaceae*, *Cupuliferae* and *Platanaceae*. Inland aquatic vegetation is poorly represented in the flora which may be attributed to the scarcity of water. Tree ferns, which are characteristic of tropical evergreen forests are remarkably absent in Andamans. Mosses and epiphytic Jungermanniales are poorly represented. It may be pointed out that a number of plants, introduced by the agency of man and nature grow well in these islands and some of them are gradually getting themselves naturalised. In the present survey 64 plants of the above category were collected. A number of plants have become new records to the flora of Andaman Islands only.

The plants have been carefully identified with the help of authentic specimens, housed in the Central National Herbarium, Shibpur. The following data are given for each species—locality, frequency, date of collection, altitude, field number and points of interest if any. The enumeration follows that of Bentham and Hooker's system of classification. The species under each genus are arranged in an alphabetical order. New records of species are marked with an asterisk. Every attempt has been made to bring the nomenclature up to date (Santa-pau, 1953; Raizada, 1958 and 1959).

ENUMERATION

* New Distribution

† Plant under further studies.

DICOTYLEDONS

ANNONACEAE

Anaxagorea luzonensis A. Gray

Long Island, Middle Andaman, Herbertabad, South Andaman; common, in flower and fruit (23.1.59 & 15.3.59), 15-20 M, 9127, 9300.

Orophaea hexandra Blume

Interview Island, North Andaman; rare, in flower and fruit (16.2.59), 10 M, 9224.

Polyalthia andamanica Kurz

Interview Island, North Andaman; rare, in flower (12.2.59), 20 M, 9209.

Trivalvaria dubia (Hook. f. & Thoms.) J. Sinclair

Syn. *Polyalthia kurzii* King

Taralait bay, North Andaman; rare, in flower and fruit (8.2.59), 20 M, 9195.

MENISPERMACEAE

Pycnarrhena calocarpa (Kurz) Diels

Syn. *Antitaxis calocarpa* Kurz

Interview Island, North Andaman; rare, in flower (15.2.59), 27 M, 9221. A climbing shrub up to 5 metres.

CAPPARIDACEAE

Capparis floribunda Wight

Rampur, North Andaman; common, in flower (22.2.59), 8 M, 9234.

C. sepilaria L.

Dhanapur, North Andaman; common, in flower (22.2.59), 10 M, 9232.

VIOLACEAE

Rinorea bengalensis (Wall.) Kuntze

Syn. *Alsodeia bengalensis* Wall.

Tugapur and Way to Taralait bay, North Andaman, Herbertabad, South Andaman; common, in flower (2.2.59, 7.2.59 & 15.3.59), 6-20 M, 9170, 9187, 9301.

PORTULACACEAE

Portulaca oleracea L.

Chaibagan, South Andaman; common, in flower (5.3.59), 20 M, 9258.

DIPTEROCARPACEAE

Dipterocarpus incanus Roxb.

Interview Island, North Andaman; common, in fruit (13.2.59), 20 M, 9217. Local name 'Gurjan'; one of the important timber yielding tree in the Andaman Islands.

ANCISTROCLADACEAE

Ancistrocladus extensus Wall.

Way to Taralait bay, North Andaman; rare, in flower (7.2.59), 13 M, 9188. A climber with hooks; wood of the stem used by the Andamanese for making pig arrows.

MALVACEAE

Hibiscus tiliaceus L.

Port Blair, South Andaman ; common, in flower and fruit (12.1.59), 7 M, 9051. Fibre from the stem used for making rope and elephant gear for dragging timber.

Sida acuta Burm. f.

Port Blair, South Andaman ; common, in flower and fruit (11.1.59), 12 M, 9011.

Urena lobata L.

Port Blair, South Andaman ; common, in flower and fruit (12.1.59), 6 M, 9050.

**U. sinuata* L.

Port Blair, South Andaman ; common, in flower and fruit (11.1.59), 4 M, 9024.

STERCULIACEAE

Melochia corchorifolia L.

Bharatpur forest, Middle Andaman ; rare, in flower and fruit (21.1.59), 30 M, 9105.

TILIACEAE

Grewia disperma Rottl.Syn. *G. laevigata* Vahl

Elphinstone harbour, Middle Andaman ; common, in flower and fruit (24.1.59), 20 M, 9131.

Triumfetta annua L.

Austin II, North Andaman ; not very common, in flower and mostly in fruit (4.2.59), 40 M, 9182.

T. bartramia L.Syn. *T. rhomboidea* Jack

Port Blair east, South Andaman ; common, in flower and fruit (11.1.59), 12 M, 9010.

RUTACEAE

Atlantia spinosa Tanaka.Syn. *A. monophylla* (Roxb.) DC.

Port Blair, South Andaman ; common, in flower and fruit (12.1.59), 15 M, 9034.

Citrus medica L.

Pokadara, Mayabundar, North Andaman ; common, in flower and fruit (20.2.59), 2 M, 9229.

Glycosmis pentaphylla Corr. var. *andamanensis* V. Narayanaswamy

Junglighat, South Andaman ; common, in flower (12.1.59), 4 M, 9046.

G. pentaphylla Corr. var. *fuscescens* V. Narayanaswamy

Mangrove bay, North Andaman ; rare, in flower (7.2.59), 5 M, 9185.

SIMAROUBACEAE

Picrasma javanica Blume

Interview Island and Pokadara, North Andaman ; not common, in flower (12.2.59 & 20.2.59), 20 M, 9208, 9228.

MELIACEAE

Xylocarpus granatum KoenigSyn. *Carapa obovata* Blume

Wright Myo, South Andaman ; common and abundant, in flower and fruit (13.1.59), 4 M, 9053.

OLACACEAE

Olex imbricata Roxb.

Long Island, Middle Andaman ; Herbertabad, South Andaman ; common, in flower and fruit (23.1.59 & 15.3.59), 20-25 M, 9125, 9299.

Xiemenia americana Willd.

Mangrove bay, North Andaman ; common, in flower and fruit (7.2.59), 9183. Fruit is yellow, resembling a small lime and is edible.

ILICACEAE

†*Ilex* sp.

Interview island, North Andaman ; rare, in flower (12.2.59), 15 M, 9205.

HIPPOCRATEACEAE

Salacia prinoidea DC.

Dhanapur creek, Mayabundar, North Andaman ; rare, in flower (29.1.59), 12 M, 9142.

RHAMNACEAE

Zizyphus glabra Roxb.

Interview Island, North Andaman ; common, in flower (16.2.59), 10 M, 9222.

Z. mauritiana Lam.Syn. *Z. jujuba* Lam.

Long Island, Middle Andaman ; common, in flower and fruit (22.1.59), 5 M, 9117. Fruits are edible.

VITACEAE

Tetrastigma andamanicum (King) Sussen.Syn. *Vitis andamanica* King

Bharatpur forest, Middle Andaman ; common, in flower (21.1.59), 20 M, 9103.

Leea indica (Burm.) Merr.Syn. *L. sambucina* Willd.

Taralait bay, North Andaman ; common, in flower and fruit (8.2.59), 20 M, 9194. Leaves are cooked and eaten by the burmans.

SAPINDACEAE

Allophyllus cobbe Blume

Interview Island, North Andaman ; common in flower and fruit (16.2.59), 10 M, 9226.

Cardiospermum halicacabum L.

Mayabundar, North Andaman ; common, in flower and fruit (30.1.59), 10 M, 9145.

Erioglossum rubiginosum BlumeSyn. *E. edule* Blume

Wright-Myo and chaibagan, South Andaman ; common, in flower (15.1.59), in flower and fruit (4.3.59), 20-24 M, 9077, 9251.

Aphania danura Radlk.

Syn. *Sapindus danura* Voigt

Taralait bay, North Andaman ; common, in flower (8.2.59), 20 M, 9198.

ANACARDIACEAE

Anacardium occidentale L.

Port Blair east, South Andaman ; common, in flower (11.1.59), 15 M, 9031. Nuts are edible.

LEGUMINOSAE

A. Lotoideae

Alysicarpus vaginalis DC.

Long Island, Middle Andaman ; rare, in flower and fruit (25.1.59), 10 M, 9136.

Crotalaria retusa L.

Corbyn's cove, South Andaman ; common, in flower (18.1.59), 2 M, 9093.

Dalbergia tamarindifolia Roxb.

Chaibagan, South Andaman ; common, in flower (5.3.59), 20 M, 9255.

D. volubilis Roxb.

Austin II, North Andaman ; rare, in flower (1.2.59), 25 M, 9153.

Desmodium polycarpum DC.

Austin II, North Andaman ; rare, in flower and fruit (1.2.59), 28 M, 9155.

D. triflorum (L.) DC.

Wright-Myo, South Andaman ; Dhanapur creek, North Andaman ; common, in flower and fruit (15.1.59 & 29.1.59), 10-24 M, 9068, 9141.

D. triquetrum DC.

Austin II, North Andaman ; common throughout the forest, in flower and fruit (1.2.59), 25M, 9154.

D. umbellatum DC.

Little Andaman ; common, in flower (10.3.59), 1 M, 9268. A spreading littoral shrub.

**Geissapsis cristata* Wight & Arn.

Port Blair east, South Andaman ; common, in flower and fruit (11.1.59), 2 M, 9018.

Mucuna gigantea DC.

Long Island, Middle Andaman ; common, in flower and fruit (22.1.59), 1 M, 9121. The fruits are clothed with brownish silky irritating hairs.

Smithia sensitiva Ait.

Wright-Myo, South Andaman ; common, in flower (15.1.59), 25 M, 9070.

Vigna cylindrica (L.) Skeels.

Syn. *V. catjang* Walp.

Austin II north, North Andaman ; common, in flower (4.2.59), 50 M, 9181. Fruit and seed form good vegetable.

V. retusa Walp.

Syn. *V. lutea* A. Gray

Little-Andaman ; common, in flower (10.3.59), 1 M, 9270.

Zornia diphylla Pers.

Corbyn's cove, South Andaman ; common, in flower and fruit (18.1.59), 2 M, 9094.

B. Caesalpinioideae

Cynometra ramiflora L. var. *mimosoides* Baker

Long Island, Middle Andaman ; common, in flower and fruit (22.1.59), 1 M, 9120. A littoral shrub in the beach forest.

Mezoneurum cucullatum Wight & Arn. var. *grandis* Baker

Taralait bay, North Andaman ; common, in flower (7.2.59), 10 M, 9192. A big woody climber with beautiful golden yellow flowers.

C. Mimosoideae

Leucaena glauca Benth.

Ross Island, South Andaman ; common and abundant, in flower and fruit (14.3.59), 6 M, 9280. A good hedge plant.

Mimosa pudica L.

Port Blair east, South Andaman ; common, in flower (11.1.59), 11 M, 9013. A sensitive plant.

Pithecolobium angulatum Benth.

Herbertabad, South Andaman ; rare, in flower and fruit (15.3.59), 20 M, 9298.

RHIZOPHORACEAE

Ceriops tagal (Perr.) C. B. Robins.

Syn. *C. candolleana* Arn.

Mangrove bay, North Andaman ; common, in flower and fruit (7.2.59), 1 M, 9184. A mangrove.

Rhizophora conjugata L.

Wright-Myo, South Andaman ; common and abundant in mangrove creeks, in flower and fruit (13.1.59), 3 M, 9054. A mangrove with arching supporting roots.

R. mucronata Lam.

Way to Yerata, Middle Andaman ; very common and abundant, in flower and fruit (21.1.59), sea level, 9109. A dominant mangrove plant forming large populations, fringing all along the tidal creeks, supported by arching aerial roots. Bark yields tannin and a dye which is used for strengthening fishing nets.

COMBRETACEAE

Combretum extensum Roxb.

Austin II, North Andaman ; common, in flower (1.2.59), 20 M, 9151.

Lumnitzera littorea (Jack) Voigt

Syn. *L. coccinea* Wight & Arn.

Long Island, Middle Andaman ; not very common, in flower and fruit (22.1.59), sea level, 9118. An erect spreading littoral shrub with bright red flowers.

Quisqualis indica L.

Chaibagan, South Andaman ; rare, in flower (5.3.59), 25 M, 9253.

MYRTACEAE

Barringtonia racemosa (L.) Roxb.

Way to Junglighat, South Andaman ; common, in flower (6.3.59), 15 M, 9264.

Syzygium claviflorum (Roxb.) Wall.

Syn. *Eugenia claviflora* Roxb.

Dilthaman, Port Blair, South Andaman ; rare, in flower (6.3.59), 16 M, 9262.

S. samarangense (Blume) Merr. and Perry

Syn. *Eugenia javanica* Lam.

Interview Island, North Andaman ; common, in flower (13.2.59), 17 M, 9210. Fruits are edible.

MELASTOMACEAE

Melastoma malabathricum L.

Port Blair east, South Andaman ; rare, in flower (11.1.59), 15 M, 9032.

Otanthra celebica Blume

Tugapur, North Andaman ; rare, in flower and fruit (2.2.59), 5 M, 9169. A scandent shrub attaining 3 metres with light rose coloured flowers.

LYTHRACEAE

Ammania baccifera L.

Port Blair, South Andaman ; common, in flower and fruit (10.1.59), 3 M, 9006. A marshy herb.

Crypteronia paniculata Blume

Junglighat and chaibagan, South Andaman ; rare, in flower (12.1.59), in flower and fruit (4.3.59), 4-25 M, 9047, 9249. Fruits are red in colour.

Rotala illecebroides Koehne

Austin II east, North Andaman ; common, in flower (3.2.59), 15 M, 9173. A marshy herb.

Pemphis acidula Forst.

Cinque Island, South Andaman ; common, in flower (12.3.59), 2 M, 9276. A littoral shrub in sandy beaches.

ONAGRACEAE

Jussieua suffruticosa L.

Wright-Myo, South Andaman ; Taralait bay, North Andaman ; common, in flower and fruit (15.1.59 & 7.2.59), 10-25 M, 9071, 9191.

Ludwigia parviflora Roxb.

Port Blair east, South Andaman ; common, in flower and fruit (11.1.59), 2 M, 9020. A marshy herb.

TURNERACEAE

Turnera ulmifolia L. var. *angustifolia* Willd.

Chaibagan, South Andaman ; common, in flower (5.3.59), 30 M, 9252.

SAMYDACEAE

**Casearia tomentosa* Roxb.

Chaibagan, South Andaman ; common, in flower (4.3.59), 20 M, 9248, 9260.

PASSIFLORACEAE

Passiflora foetida L.

Ross Island, South Andaman ; common, in flower and fruit (14.3.59), 10 M, 9283.

P. suberosa L.

Ross Island, South Andaman ; common, in flower and fruit (14.3.59), 5 M, 9281.

CUCURBITACEAE

Citrullus vulgaris Schrad.

Port Blair, South Andaman ; common, in flower (14.3.59), 10 M, 9278. The popular water melon famous for its refreshing fruit.

**Trichosanthes bracteata* Voigt var. *tomentosa* Heyne

Austin II, North Andaman ; rare, in flower (1.2.59), 20 M, 9152.

UMBELLIFERAE

Centella asiatica Urb.

Chaibagan, South Andaman ; common, in flower (5.3.59), 20 M, 9259.

RUBIACEAE

Anthocephalus indicus A. Rich.

Syn. *A. cadamba* Miq.

Avacara nala, South Andaman ; common, in flower (17.1.59), 16 M, 9088. Wood is used for making tea boxes.

†*Chiococca* sp.

Interview Island, North Andaman ; rare, in flower (12.2.59), 12 M, 9204.

Coffea liberica Hiern

Interview Island, North Andaman ; rare, in flower and fruit (13.2.59), 20 M, 9212.

Guettarda speciosa L.

Long Island, Middle Andaman, Little Andaman ; common, in flower and fruit (23.1.59), in flower (10.3.59), 2 M, 9128, 9271. A littoral shrubby tree upto 7 metres with fragrant flowers.

Hedyotis paradoxa Kurz

Wright-Myo, South Andaman ; common, in flower (13.1.59), 100 M, 9060.

Ixora coccinea L.

Port Blair, South Andaman ; common, in flower (17.1.59), 15 M, 9080. A good hedge plant.

Morinda citrifolia L.

Port Blair, South Andaman ; common, in flower and fruit (17.1.59), 16 M, 9081.

M. umbellata L.

Syn. *M. tetrandra* Jack

Dilthaman, Port Blair, South Andaman ; common, in flower (28.2.59), 17 M, 9242.

**Oldenlandia biflora* L.

Mayabundar and Taralait bay, North Andaman ; common, in flower and fruit (30.1.59 & 7.2.59), 12 M, 9146, 9190.

Oldenlandia corymbosa L.

Corbyn's cove, South Andaman ; Dhanapur creek, North Andaman ; common, in flower and fruit (18.1.59 & 29.1.59), 2-10 M, 9095, 9139.

Paederia foetida L.

Interview Island, North Andaman ; rare, in flower and fruit (16.2.59), 10 M, 9223. A slender twiner.

†*Psychotria* sp.

Avacara nala, South Andaman ; common, in flower (17.1.59), 16 M, 9087.

Randia densiflora Benth.

Dilthaman and Junglighat, South Andaman ; Pokadara, North Andaman ; common, in flower (12.1.59, 20.2.59 & 6.3.59), 4-15 M, 9048, 9227, 9263.

Uncaria pedicellata Roxb.

Chaibagan, South Andaman ; common, in flower (4.3.59), 20 M, 9247. A climbing shrub with hooks.

COMPOSITAE

Adenostemma viscosum Forst.

Austin III, North Andaman ; common, in flower (3.2.59), 15 M, 9178.

Ageratum conyzoides L.

Bharatpur forest, Middle Andaman ; very common and abundant, in flower (21.1.59), 25 M, 9101.

Blumea mollis (D. Don) Merr.

Syn. *B. wightiana* DC.

Port Blair, South Andaman ; common, in flower and fruit (10.1.59), 3 M, 9008. Plant parts have a good smell.

B. virens (Wall.) DC.

Tugapur, North Andaman ; common, in flower (2.2.59), 20 M, 9164.

Eclipta prostrata L.

Syn. *E. alba* Hassk.

Mayabundar, North Andaman ; common, in flower (30.1.59), 10 M, 9144.

Elephantopus scaber L.

Port Blair east, South Andaman ; common, in flower (11.1.59), 5 M, 9025.

Eupatorium odoratum L.

Port Blair, South Andaman ; common and abundant, in flower (11.1.59), 8 M, 9027. A widely distributed plant.

**Launaea sarmentosa* (Willd.) Alston

Syn. *L. pinnatifida* Cass.

Cinque Island, South Andaman ; common, in flower (12.3.59), 2 M, 9277.

**Mikania cordata* (Burm.) B. L. Robinson

Syn. *M. scandens* Clarke non Willd.

Junglighat, South Andaman ; common, in flower (12.1.59), 7 M, 9040.

Sphaeranthus indicus L.

Port Blair east, South Andaman ; common, in flower (11.1.59), 1 M, 9019.

Spilanthes acmella Murr.

Port Blair, South Andaman ; common, in flower (10.1.59), 3 M, 9005. A marshy herb.

Synedrella nodiflora Gaertn.

Port Blair, South Andaman ; common, in flower (11.1.59), 15 M, 9030.

**Tithonia tagetiflora* Desf.

Sadipur, South Andaman ; common, in flower (28.2.59), 22 M, 9240. A shrub growing to a height of 3 metres with yellow heads.

Tridax procumbens L.

Mayabundar, South Andaman ; common, in flower (20.2.59), 10 M, 9230.

Vernonia cinerea Less.

Port Blair north, South Andaman ; common, in flower (12.1.59), 10 M, 9037.

Wedelia biflora DC.

Little Andaman ; common and abundant in the sandy beach, in flower (10.3.59), 2 M, 9267. A littoral undershrub in sandy beaches.

GOODENIACEAE

Scaevola frutescens Krause.

Syn. *S. koenigii* Vahl

Little Andaman ; common, in flower (10.3.59), 2 M, 9269. A littoral shrub occurring in large populations.

MYRSINEAE

Aegiceras corniculatum Blanco

Syn. *A. majus* Gaertn.

Corbyn's cove, South Andaman ; common, in flower and fruit (18.1.59), sea level, 9092. A mangrove.

Maesa andamanica Kurz

Wright-Myo, South Andaman ; rare, in flower (13.1.59), 30 M, 9055.

M. ramentacea A. DC.

Interview Island, North Andaman ; rare, in flower (12.2.59), 12 M, 9203.

EBENACEAE

Diospyros discolor Willd.

Syn. *D. argentea* Griff.

Dilthaman, Port Blair, South Andaman ; common, in flower and fruit (6.3.59), 15 M, 9261.

OLEACEAE

Jasminum subglandulosum Kurz

Wright-Myo, South Andaman ; rare, in flower and fruit (13.1.59), 50 M, 9066.

Linociera terniflora Wall.

Long Island, Middle Andaman ; rare, in flower and fruit (23.1.59), 20 M, 9126.

APOCYNACEAE

Anodendron paniculatum A. DC.

Dilthaman, Port Blair, South Andaman ; rare, in flower (28.2.59), 17 M, 9241. Stem yields a strong fibre, used by the Andamanese for making their bow strings.

Kopsia fruticosa A. DC.

Mayabundar, North Andaman ; rare, in flower and fruit (20.2.59), 10 M, 9231.

Strophanthus wallichii A. DC.

Chaoldari, South Andaman ; rare, in flower and fruit (15.3.59), 15 M, 9290.

Tabernaemontana crispa Roxb.

Chaibagan, South Andaman ; common, in flower (4.3.59), 22 M, 9250.

Thevetia peruviana (Pers.) Schum.

Syn. *T. nereifolia* Juss. ex Steud.

Long Island, Middle Andaman ; common, in flower and fruit (25.1.59), 10 M, 9137.

ASCLEPIADACEAE

Sarcolobus carinatus Wall.

Way to Chaoldari, South Andaman ; rare, in flower (15.3.59), 5 M, 9287.

LOGANIACEAE

Fagraea morindaefolia Blume

Port Blair, South Andaman ; common, in flower (28.2.59), 20 M, 9245.

GENTIANACEAE

Canscora diffusa R. Br.

Taralait bay, North Andaman ; rare, in flower (8.2.59), 20 M, 9196. An erect slender dichotomously branched herb upto 30 centimetres high.

BORAGINACEAE

Coldenia procumbens L.

Dilthaman, Port Blair, South Andaman ; common, in flower (28.2.59), 17 M, 9244.

Heliotropium indicum L.

Taralait bay, North Andaman ; common, in flower and fruit (7.2.59), 13 M, 9189.

Tournefortia ovata Wall.

Austin II north east, North Andaman ; common, in flower and fruit (3.2.59), 8 M, 9177.

CONVOLVULACEAE

Ipomoea angulata Lam.

Syn. *Quamoclit phoenicea* Choisy

Port Blair, South Andaman ; common, in flower (17.1.59), 15 M, 9090.

I. aquatica Forsk.

Syn. *I. reptans* Poir.

Dilthaman Lake, Port Blair, South Andaman ; common, in flower (17.1.59), 15 M, 9079. A trailing aquatic herb rooting at nodes.

**I. obscura* Ker.

Long Island, Middle Andaman ; common, in flower (22.1.59), 10 M, 9116.

I. pes-caprae (L.) Sweet

Syn. *I. biloba* Forsk.

Bamboo-flat, South Andaman ; common, in flower (15.1.59), 8 M, 9078. A trailing herb with pink flowers often found on the sandy beaches.

Merremia hederacea (Burm. f.) Hall. f.

Syn. *M. chryseides* Hall. f.

Interview Island, North Andaman ; common, in flower and fruit (15.2.59), 10 M, 9218.

M. umbellata Hall. f.

Syn. *Ipomoea cymosa* Roem. & Schult.

Port Blair north, South Andaman ; Austin II, North Andaman ; common, in flower (12.1.59 & 1.2.59), 5-20 M, 9049, 9162. Leaves with shining hairs on both surfaces.

M. vitifolia Hall. f.

Syn. *Ipomoea vitifolia* Blume

Austin III, North Andaman ; common, in flower (3.2.59), 20 M, 9179.

SOLANACEAE

Solanum torvum Sw.

Bharatpur forest, Middle Andaman ; common, in flower (21.1.59), 25 M, 9107. Fruits form a good vegetable.

SCROPHULARIACEAE

**Limnophila chinensis* (Osbeck) Merr.

Syn. *L. hirsuta* Benth.

Wright-Myo, South Andaman ; rare, in flower (13.1.59), 80 M, 9059. A marshy herb with the plant parts having an aromatic smell.

Scoparia dulcis L.

Elphinstone harbour, Middle Andaman ; common, in flower (24.1.59), 8 M, 9132. A marshy slender herb.

ACANTHACEAE

Acanthus ilicifolius L. var. *integrifolia* Clarke

Way to Chaoldari, South Andaman ; common and abundant, in flower (15.3.59), 5 M, 9286. A spinescent spreading shrub occurring in large populations in mangrove swamps, often fringing small creeks in tidal streams.

Daedalacanthus suffruticosus T. Anders.

Austin II, North Andaman ; common, in flower (1.2.59), 35 M, 9159. An erect undershrub in deciduous forest with violet coloured flowers.

Eranthemum palatiferum Nees

Austin II, North Andaman ; common, in flower (1.2.59), 31 M, 9158.

Hygrophila quadrivalvis Nees

Port Blair, South Andaman ; common and abundant everywhere in marshy places, in flower and fruit (10.1.59), 3 M, 9007.

†*Hypoestes* sp.

Austin II, North Andaman ; common, in flower (1.2.59), 30 M, 9157.

Justicia gendarussa L. f.

Avacara nala, South Andaman ; common, in flower (17.1.59), 15 M, 9089.

**Lepidagathis incurva* D. Don.

Syn. *L. hyalina* Nees

Austin II, North Andaman ; common, in flower (1.2.59), 30 M, 9156.

Micranthus oppositifolius Wendl.

Bambooflat, South Andaman ; rare, in flower (13.1.59), 3 M, 9052.

Nelsonia campestris R. Br.

Bharatpur forest, Middle Andaman ; common, in flower (21.1.59), 20 M, 9100.

Peristrophe andamanica Clarke

Tugapur, North Andaman ; common, in flower (2.2.59), 5 M, 9168. A small scandent shrub with pink flowers.

Rungia parviflora Nees var. *pectinata* Clarke

Syn. *R. pectinata* Nees

Port Blair east, South Andaman ; common, in flower (11.1.59), 5 M, 9026.

**Staurogyne zeylanica* Kuntze

Austin II, North Andaman ; common, in flower (1.2.59), 20 M, 9160.

Strobilanthes glandulosus Kurz

Taralait bay, North Andaman ; common, in flower and fruit (8.2.59), 20 M, 9199. An erect, small herb growing upto a height of 6 inches and rooting at nodes.

Thunbergia laurifolia Lindl.

Bharatpur forest, Middle Andaman ; common, in flower (21.1.59), 15 M, 9108. A lofty climber with violet flowers.

VERBENACEAE

Clerodendrum infortunatum Gaertn.

Austin II, North Andaman ; common, in flower (1.2.59), 20 M, 9149.

Gmelina asiatica L.

Dilthaman, Port Blair, South Andaman ; common and abundant, in flower (28.2.59), 17 M, 9243.

Lantana camara L. var. *aculeata* (L.) Moldenke

Syn. *Lantana aculeata* L.

Port Blair, South Andaman ; common, in flower (5.3.59), 15 M, 9254.

Lippia geminata H.B.K.

Colinpur, South Andaman ; common and abundant, in flower (15.3.59), 15 M, 9293.

Phyla nodiflora (L.) Greene

Syn. *Lippia nodiflora* Rich.

Port Blair, South Andaman ; common, in flower (10.1.59), 3 M, 9009.

Sphenodesme unguiculata Schauer.

Long Island, Middle Andaman ; common, in flower (23.1.59), 25 M, 9124. A climber, conspicuous by the fruits which are supported by enlarged, leafy, spatulate bracts ; flowers cream coloured and fragrant.

Stachytarpheta indica Vahl

Port Blair east, South Andaman ; common, in flower (11.1.59), 11 M, 9012.

Vitex trifolia L. f.

Port Blair, South Andaman ; common, in flower and fruit (10.1.59), 13 M, 9001.

LABIATAE

Anisomeles indica (L.) Kuntze

Junglighat, South Andaman ; common, in flower (12.1.59), 7 M, 9039. Plant parts have a good smell.

**Hyptis capitata* Jacq.

Junglighat, South Andaman ; common, in flower (12.1.59), 10 M, 9038.

Ocimum sanctum L.

Bambooflat, South Andaman ; common, in flower and fruit (13.1.59), 4 M, 9067.

NYCTAGINACEAE

Pisonia aculeata L.

Little Andaman ; common, in bud and flower (10.3.59), 2 M, 9266. A littoral shrubby tree in the sandy beach.

P. excelsa DC.

Havelock Island and Colinpur, South Andaman ; rare, in flower (20.1.59), in flower and fruit (15.3.59), 2-15 M, 9097, 9292. A tree upto 10 metres with the fruits extremely sticky to touch ; Elephants like the foliage very much and eat them well. Hence it is known as 'Hathipedu' locally.

AMARANTHACEAE

Achyranthes aspera L.

Port Blair, South Andaman ; common, in flower (12.1.59), 15 M, 9036.

Alternanthera repens (L.) Steud.

Ross Island, South Andaman ; common, in flower (14.3.59), 5 M, 9282.

Amaranthus spinosus L.

Elphinstone harbour, Middle Andaman ; common, in flower (24.1.59), 10 M, 9134.

POLYGONACEAE

Antigonon leptopus Hook. & Arn.

Ross Island, South Andaman ; common, in flower (14.3.59), 5 M, 9284.

PIPERACEAE

Peperomia pellucida H.B.K.

Long Island, Middle Andaman ; rare, in flower (25.1.59), 15 M, 9135. A small slender herb rooting at nodes.

LAURACEAE

Cassytha filiformis L.

Little Andaman ; common, in flower and fruit (11.3.59), 2 M, 9275. A twiner parasitic on *Ipomoea pes-caprae* in the sandy beach.

Litsea monopetala (Roxb.) Pers.

Syn *L. polyantha* Juss.

Taralait bay, North Andaman ; common, in flower (8.2.59), 20 M, 9193.

PROTEACEAE

**Helicia serrata* (R. Br.) Blume

Syn *H. curtisii* Gamble

Way to Taralait bay, North Andaman ; rare, in flower (7.2.59), 10 M, 9186.

LORANTHACEAE

Dendrophthoe falcata (L. f.) Etting.

Syn. *Loranthus longiflorus* Desr.

Chaibagan, South Andaman ; rare, in flower (4.3.59), 20 M, 9246. A parasite with scarlet flowers.

EUPHORBIACEAE

Actephila excelsa Muell.-Arg.

Interview Island, North Andaman ; rare, in flower and fruit (12.2.59), 15 M, 9206.

Antidesma diandrum Roth (Male)

Herbertabad, South Andaman ; common, in flower (15.3.59), 20 M, 9297.

Aporosa villosula Kurz

Avacara nala, South Andaman ; rare, in flower (17.1.59), 15 M, 9085.

Baccurea sapida Muell.-Arg.

Dhanapur creek and Interview Island, North Andaman ; rare, in flower (30.1.59 & 16.2.59), 10 M, 9148, 9225. A littoral tree with yellow catkin.

Breynia rhamnoides Muell.-Arg.

Chaibagan, South Andaman ; common, in flower and fruit (5.3.59), 20 M, 9257.

Bridelia griffithii Hook. f.

Syn. *B. ovata* Kurz

Long Island, Middle Andaman ; rare, in flower and fruit (22.1.59), 12 M, 9113. A straggling shrub, climbing on other trees.

B. ovata Decne.

Avacara nala, South Andaman ; Little Andaman ; common, in flower (17.1.59) and in flower and fruit (11.3.59), 2 to 16 M, 9086, 9273.

Claoxylon indicum Hassk.

Interview Island, North Andaman ; common, in flower (13.2.59), 14 M, 9213.

Cleidion javanicum Blume

Bharatpur forest, Middle Andaman ; rare, in flower and fruit (21.1.59), 25 M, 9102.

Cnesmone javanica Blume

Austin II north, North Andaman ; common, in flower (4.2.59), 35 M, 9180. A twiner with scabrid leaves.

Dryptes andamanica (Kurz) Pax & Hoffm.

Syn. *Hemicyclia andamanica* Kurz

Interview Island, North Andaman ; common, in flower (13.2.59), 20 M, 9216.

Euphorbia hirta L.

Bharatpur forest, Middle Andaman ; common, in flower (21.1.59), 30 M, 9104.

E. prostrata Ait.

Port Blair, South Andaman ; common, in flower (26.1.59), 12 M, 9238.

E. thymifolia L.

Dhanapur creek, North Andaman ; common, in flower (29.1.59), 10 M, 9140.

Gelonium bifarium Roxb.

Long Island, Middle Andaman ; rare, in flower (23.1.59), 20 M, 9122.

G. multiflorum A. Juss.

Mayabundar, North Andaman ; common, in flower (30.1.59), 15 M, 9143.

**Glochidion* sp.

Interview Island, North Andaman ; rare, in flower (15.2.59), 20 M, 9220.

Jatropha curcas L.

Port Blair, South Andaman ; common, in flower and fruit (26.2.59), 2 M, 9239.

Macaranga tanarius Muell.-Arg.

Long Island, Middle Andaman ; common, in flower (22.1.59), 10 M, 9114. A small tree with peltate leaves.

Mallotus acuminatus Muell.-Arg. (Female)

Austin II and Interview Island, North Andaman ; common, in flower and fruit (1.2.59 to 15.2.59), 20-35 M, 9161, 9219.

M. acuminatus Muell.-Arg. (Male)

Wright-Myo and Colinpur, South Andaman ; common, in flower (13.1.59 & 15.3.59), 15 to 80 M, 9063, 9291.

M. andamanicus Hook. f.

Interview Island, North Andaman ; common, in flower (12.2.59), 20 M, 9207.

M. repandus Muell.-Arg. (Female)

Colinpur, South Andaman ; common, in flower (15.3.59), 15 M, 9294.

Kirganelia reticulata (Poir.) Baill.

Rampur, North Andaman ; common, in flower (22.2.59), 10 M, 9236.

Phyllanthus niruri L.

Mayabundar, North Andaman ; common, in flower (30.1.59), 10 M, 9147.

Sarcostigma wallichii Baill.

Wright-Myo, South Andaman ; rare, in flower (15.1.59), 160 M, 9076.

ULMACEAE

Trema amboinensis Blume

Austin II north-east, North Andaman ; common, in flower and fruit (3.2.59), 8 M, 9176. Popularly known as 'Puckri pathi' as the leaves are used for feeding goats.

MORACEAE

Ficus altissima Blume

Way to Chaoldari, South Andaman ; rare, in flower and fruit (15.3.59), 5 M, 9288.

F. benamina L.

Port Blair, South Andaman ; common, in flower and fruit (12.1.59), 15 M, 9033.

F. gibbosa Blume

Little Andaman ; rare, in flower (10.3.59), 3 M, 9272. A tree in the littoral beach forest.

F. hispida L. f.

Long Island, Middle Andaman ; common, in flower and fruit (22.1.59), 10 M, 9110. A small tree in the beach forest with scabrid leaves.

F. retusa L. var. *nitida* Thunb.

Colinpur, South Andaman ; rare, in flower (15.3.59), 8 M, 9295. A spreading tree with prop roots.

Streblus asper Lour. (Male)

Elphinstone harbour, Middle Andaman, Interview Island, North Andaman ; common, in flower (24.1.59 & 13.2.59), 15-18 M, 9130, 9211. Wood is cut up into small pieces and mixed with tobacco for making burmese cheroots.

URTICACEAE

**Pilea microphylla* Liemb.

Chaibagan, South Andaman ; common, in flower (5.3.59), 10 M, 9256.

Pipturus velutinus Wedd.

Interview Island, North Andaman ; common, in flower (13.2.59), 10 M, 9215. A small tree with the abaxial surface of the leaf ash coloured.

CASUARINACEAE

Casuarina equisetifolia Forst.

Ross Island, South Andaman ; common, in flower and fruit (14.3.59), 5 M, 9279.

Monocotyledons

HYDROCHARITACEAE

Halophila ovata Gaud.

Port Blair, South Andaman ; common, in flower (14.3.59), 9285. A marine angiospermic weed common in shallow waters in the tidal zone.

ORCHIDACEAE

Cymbidium aloifolium Sw.

Port Blair, South Andaman ; common, in flower (19.3.59), 20 M, 9304. An epiphytic orchid found on *Ficus*.

**Dendrobium pierardi* Roxb.

Chaoldari, South Andaman ; common, in flower (26.2.59), 5 M, 9237. An epiphytic orchid with fragrant white flowers, found on *Enterolobium saman*.

Dendrobium secundum Wall.

Port Blair east, South Andaman ; common, in flower (11.1.59), 15 M, 9028. An epiphytic orchid on *Mangifera indica* with pink flowers.

Eulophia andamanensis Reichb.

Little-Andaman ; rare, in flower and fruit (11.3.59), 2 M, 9274. A terrestrial orchid with green flowers, growing in beach forests.

SCITAMINACEAE

Clinogyne grandis Benth.

Taralait bay, North Andaman ; common, in flower (8.2.59), 22 M, 9200. A scandent shrub with white flowers.

DIOSCOREACEAE

Dioscorea glabra Roxb.

Port Blair east, South Andaman ; rare, in flower (11.1.59), 15 M, 9029. Tubers are edible and cooked.

LILIACEAE

**Chlorophytum orchidastrum* Lindl.

Wright-Myo, South Andaman ; rare, in flower (15.1.59), 70 M, 9074.

Smilax aspericaulis Wall.

Wright-Myo, South Andaman ; common, in flower (13.1.59), 60 M, 9056. A woody climber with the leaves 11 inches long and 6 inches wide.

COMMELINACEAE

**Commelina nudiflora* L.

Elphinstone harbour, Middle Andaman ; rare, in flower (24.1.59), 8 M, 9129.

FLAGELLARIACEAE

Flagellaria indica L.

Rampur, North Andaman ; common, in flower (22.2.59), 12 M, 9235.

PALMAE

Areca triandra Roxb.

Wright-Myo, South Andaman ; rare, in flower (13.1.59), 80 M, 9064.

Calamus viminalis Willd.

Long Island, Middle Andaman ; common, in flower (22.1.59), 10 M, 9115. An erect thick cane armed with black spines ; Spadix ending in a long slender, armed, whip-like appendage whose tip is flagelliferous.

Licuala spinosa Wurm.

Bharatpur forest, Middle Andaman ; common, in flower (21.1.59), 20 M, 9106. An erect palm with palmately lobed leaves with spines on leaf petioles.

AROIDEAE

Pothos scandens L.

Long Island, Middle Andaman ; common, in flower (23.1.59), 20 M, 9123. A climber commonly found adpressed to tree trunks.

CYPERACEAE

Cyperus iria L.

Austin II east, North Andaman ; common, in flower (3.2.59), 15 M, 9172.

C. rotundus L.Syn. *C. subcapitatus* Clarke

Port Blair east, South Andaman ; common, in flower (11.1.59), 2 M, 9021.

Fimbristylis miliacea Vahl

Port Blair east, South Andaman ; common, in flower (11.1.59), 1 M, 9015.

**Fuirena glomerata* Lam.

Port Blair east, South Andaman ; common, in flower (11.1.59), 1 M, 9017.

Hypolytrum latifolium Rich.

Wright-Myo, South Andaman ; rare, in flower (13.1.59), 70 M, 9057.

Kyllinga monocephala Rottb.

Wright-Myo, South Andaman ; rare, in flower (15.1.59), 30 M, 9073.

Mariscus compactus Druce.Syn. *M. microcephalus* Presl.

Bharatpur forest, Middle Andaman ; common, in flower (21.1.59), 20 M, 9098.

M. pennatus Dom.Syn. *M. albescens* Gaud.Tylarabat Khadi, South Andaman ; common and abundant, in flower (15.3.59), 5 M, 9303. A sedge growing to a height of 2 metres found in marshy swamp along with *Acrostichum aureum*.**Scirpus erectus* Poir.Syn. *S. juncoides* Roxb.

Port Blair, South Andaman ; common, in flower (11.1.59), 1 M, 9016.

GRAMINEAE

Brachiaria distachya (L.) Stapf.Syn. *Panicum distachyum* L.

Austin II north east, North Andaman ; common, in flower (3.2.59), 5 M, 9175.

Centotheca latifolia (Osbeck) Trin.Syn. *C. lappacea* Desv.

Elphinstone harbour, Middle Andaman ; common, in flower (24.1.59), 8 M, 9133.

Cyrtococcum oxyphyllum (Hochst. & Steud.) StapfSyn. *Panicum pilipes* Nees & Arn.

Tugapur, North Andaman ; common, in flower (2.2.59), 20 M, 9166.

C. patens (L.) A. CamusSyn. *Panicum patens* L.

Austin II, North Andaman ; common, in flower (1.2.59), 20 M, 9150.

C. trigonum (Retz.) A. CamusSyn. *Panicum trigonum* Retz.

Wright-Myo, South Andaman ; common, in flower (15.1.59), 100 M, 9075. A spreading grass rooting at nodes.

Dichanthium annulatum StapfSyn. *Andropogon annulatus* Forsk.

Long Island, Middle Andaman ; common, in flower (22.1.59), 1 M, 9119. A good fodder grass.

Dinochloa andamanica Kurz

Long Island, Middle Andaman ; common, in flower (22.1.59), 10 M, 9111. A climber, usually known as 'climbing bamboo' attains great heights on tall trees.

Echinochloa colona LinkSyn. *Panicum colonum* L.

Bharatpur forest, Middle Andaman ; common, in flower (21.1.59), 20 M, 9099. An excellent fodder grass.

E. crus-galli (L.) Beauv.Syn. *Panicum crus-galli* L.

Tugapur, North Andaman ; rare, in flower (2.2.59), 20 M, 9165. A good fodder grass.

Eleusine indica Gaertn.

Tugapur, North Andaman ; common, in flower (2.2.59), 10 M, 9167.

Eragrostis elongata Jacq.

Junglighat, South Andaman ; common, in flower (12.1.59), 3 M, 9042.

E. tenella (L.) Beauv. ex Roem. & Schult.Syn. *E. tenella* Roem. & Schult. var. *plumosa* Stapf
Havelock Island, South Andaman ; common and abundant, in flower (20.1.59), 2 M, 9096. A good fodder grass.*E. unioides* NeesSyn. *E. amabilis* Wight & Arn.

Dhanapur, North Andaman ; common, in flower (29.1.59), 10 M, 9138.

Heteropogon contortus (L.) Beauv. ex Roem. & Schult.Syn. *Andropogon contortus* L.

Port Blair, South Andaman ; common, in flower (10.1.59), 13 M, 9003. A good fodder grass.

Ischaemum aristatum L.

Port Blair, South Andaman ; common, in flower (10.1.59), 8 M, 9004.

I. muticum L.

Corbyn's cove, South Andaman ; common, in flower (18.1.59), 2 M, 9091. A trailing grass rooting at nodes found in sandy beach.

I. rugosum Salisb.

Port Blair east, South Andaman ; common, in flower (11.1.59), 1 M, 9014.

Oplismenus compositus Beauv.

Junglighat, South Andaman ; common, in flower (12.1.59), 4 M, 9044.

**Paspalum conjugatum* Berg.

Tugapur, North Andaman ; common, in flower (2.2.59), 20 M, 9163. A fodder grass.

P. scrobiculatum L.

Junglighat, South Andaman ; common, in flower (12.1.59), 3 M, 9041.

Polytoca wallichiana Benth.

Wright-Myo, South Andaman ; common, in flower (15.1.59), 24 M, 9069. An erect grass growing to a height of 2-2½ metres.

Sacciolepis indica Chase

Syn. *Panicum indicum* L.

Port Blair east and north, South Andaman ; common, in flower (11.1.59), 2 M, 9022, 9043.

Themeda triandra Forsk.

Syn. *Anthistiria imberbis* Retz.

Port Blair, South Andaman ; common, in flower (10.1.59), 13 M, 9002.

Thysanolaena maxima Kuntze

Syn. *T. agrostis* Nees

Wright-Myo, South Andaman ; common, in flower (13.1.59), 50 M, 9065. A grass growing to a height of 3-4 metres.

FERNS AND FERN ALLIES

LYCOPODIACEAE

Lycopodium phlegmaria L.

Between Colinpur and Tusanobad, South Andaman ; rare, in strobili (15.3.59), 18 M, 9302. An epiphyte on *Enterolobium saman*.

SCHIZAEACEAE

Lygodium cricinnatum (Burm.) Sw.

Syn. *L. dichotomum* Sw.

Herbertabad, South Andaman ; rare, in sori (15.3.59), 20 M, 9289. A climbing fern.

L. flexuosum (L.) Sw.

Syn. *L. pinnatifidum* Sw.

Junglighat, South Andaman ; common, in sori (12.1.59), 4 M, 9045. A climbing fern.

GLEICHENIACEAE

Dicranopteris linearis (Burm.) Underwood

Syn. *Gleichenia dichotoma* Willd.

Dilthaman, Port Blair, South Andaman ; rare, in sori (6.3.59), 15 M, 9265. A scandent spreading fern.

POLYPODIACEAE

Drymoglossum piloselloides (L.) Presl

Herbertabad, South Andaman ; rare, in sori (15.3.59), 10 M, 9296. An epiphytic fern.

Pyrrosia adnascens (Sw.) Ching

Syn. *Polypodium adnascens* Sw.

Port Blair north, South Andaman ; common and abundant, in sori (12.1.59), 15 M, 9035. An epiphytic fern creeping on the trunk of *Ficus benjamina*, forming thick mattresses.

THELYPTERIDACEAE

Nephrodium crassifolium Hook.

Wright-Myo, South Andaman, common, in sori (13.1.59), 80 M, 9058. A terrestrial shrubby fern.

LINDSAYOIDEAE

Schizoloma ensifolium (Sw.) J. Sm.

Syn. *Lindsaya ensifolia* Sw.

Avacara nala, South Andaman ; common, in sori (17.1.59), 25 M, 9083.

PTERIDIOIDEAE

Acrostichum aureum L.

Port Blair east, South Andaman ; common, in sori (11.1.59), 2 M, 9023. A shrubby fern, found in marshy swamps forming large populations.

Pteris longifolia L.

Interview Island, North Andaman ; common, in sori (12.2.59), 10 M, 9202.

P. pellucida Presl

Tugapur, North Andaman ; rare, in sori (2.2.59), 23 M, 9171.

P. quadriaurita Retz

Long Island, Middle Andaman ; common, in sori (22.1.59), 15 M, 9112.

ASPLENIOIDEAE

Asplenium nidus L.

Wright-Myo, South Andaman ; common and abundant, in sori (15.1.59), 25 M, 9072. An epiphytic fern with spreading fronds.

BLECHNOIDEAE

Blechnum orientale L.

Avacara nala, South Andaman ; common, in sori (17.1.59), 25 M, 9084.

LOMARIOPSIDOIDEAE

Egenolfia appendiculata (Willd.) J. Sm.

Syn. *Acrostichum appendiculatum* Willd.

Wright-Myo, South Andaman ; rare, in sori (13.1.59), 100 M, 9061.

ADIANTACEAE

Adiantum philippense L.

Syn. *A. lunulatum* Burm.

Taralait bay, North Andaman ; common, in sori (8.2.59), 20 M, 9197.

Ceratopteris thalictroides (L.) Brong.

Austin II east, North Andaman ; common, in sori (3.2.59), 15 M, 9174. A spreading fern common in paddy fields.

Gymnogramme calomelanos Kaulf.

Wright-Myo, South Andaman ; common, in sori (13.1.59), 120 M, 9062. A terrestrial fern with silvery sori.

CYCADACEAE

Cycas rumphii Miq.

Taralait bay, North Andaman ; common and abundant in the sandy beach, in male and female stage (8.2.59), 3 M, 9201. A tree growing to a height of 10 metres and showing forking of the stem into 3-5 branches ; male cone yellowish orange, and the megasporophylls have 3-6 ovules in each. The fruit is edible when cooked, but poisonous when raw and is eaten by the Andamanese. The resin from the tree is applied to malignant ulcers.

GNETACEAE

Gnetum scandens Roxb.

Interview Island, North Andaman ; common, in female stage (13.2.59), 14 M, 9214. A woody lian, attaining great heights over tall trees in evergreen forests.

SUMMARY

The flora of the Andaman Islands is described in this paper. Andamans are a group of large and small islands 204 in number, lying in the Bay of Bengal between 13°41' and 10°30' N. latitudes and 92°11' and 93°7' E. longitudes. The islands are a mass of hills running north to south and enclosing very narrow valleys, the whole covered by dense tropical jungles. The mean temperature of the islands vary from 21 to 30° centigrade while the annual rainfall amounts to 304·8 centimetres.

The following types of vegetation are met with in the islands namely Mangrove forests, Beach forests, Deciduous forests, Evergreen forests at lower elevations, Moist evergreen forests at higher elevations, Vegetation of cleared lands and open areas and Marine vegetation.

In the evergreen forests of South Andaman *Dipterocarpus griffithii* and *D. incanus* are the prominent trees. Their principal associates are *Planchonia andamanica*, *Hopea odorata*, and *Planchonella longipetiolatum*. At higher elevations, the forests become deciduous with *Pterocarpus dalbergioides* as the most common tree. It grows along with *Terminalia procera*, *Salmania insignis*, *Parisha insignis* and *Pterocymbium tinctorium*. The undergrowth consists of a number of shrubs, climbers and a few herbs. Mixed deciduous forests composed of *Dipterocarpus incanus*, species of *Terminalia* and *Pterygota alata* are present in Long Island and Bharatpur of Middle Andaman. *Calamus andamanicus* and *Dinorchloa andamanica* are the common woody climbers here. Tropical wet evergreen and deciduous forests are met with in Austin, Tugapur and Interview Island of North Andaman. *Bambusa lineata* forms extensive thickets in the wet evergreen forest, whose composition is more or less similar to that of South Andaman. In the deciduous forests, *Canarium euphyllum*, *Diospyros oocarpa*, *Tetrameles nudiflora* constitute the major vegetation. The undergrowth in the different forests of South, Middle

and North Andaman as well as the vegetation in open areas are described in detail.

Mangrove forests occur in great abundance in Austin strait, Porlobjig and Bomulungta. *Rhizophora mucronata* and *R. conjugata* are the dominant trees here found in association with *Bruguiera gymnorrhiza* and *B. parviflora*. Different species of marine algae occur in shallow waters in the tidal zone of the coasts.

The similarities of the Andaman flora with that of Burma and Malaya are discussed. Euphorbiaceae is well represented in the flora with Gramineae, Rubiaceae and Leguminosae ranking next in order. Shrubs, climbers and trees constitute fairly a major proportion in the flora. Inland aquatic vegetation is poorly developed. Tree ferns, characteristic of evergreen forests are absent. Plants, introduced by the agency of man and nature grow well in these islands. An enumeration of the species collected, together with necessary field data is given.

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